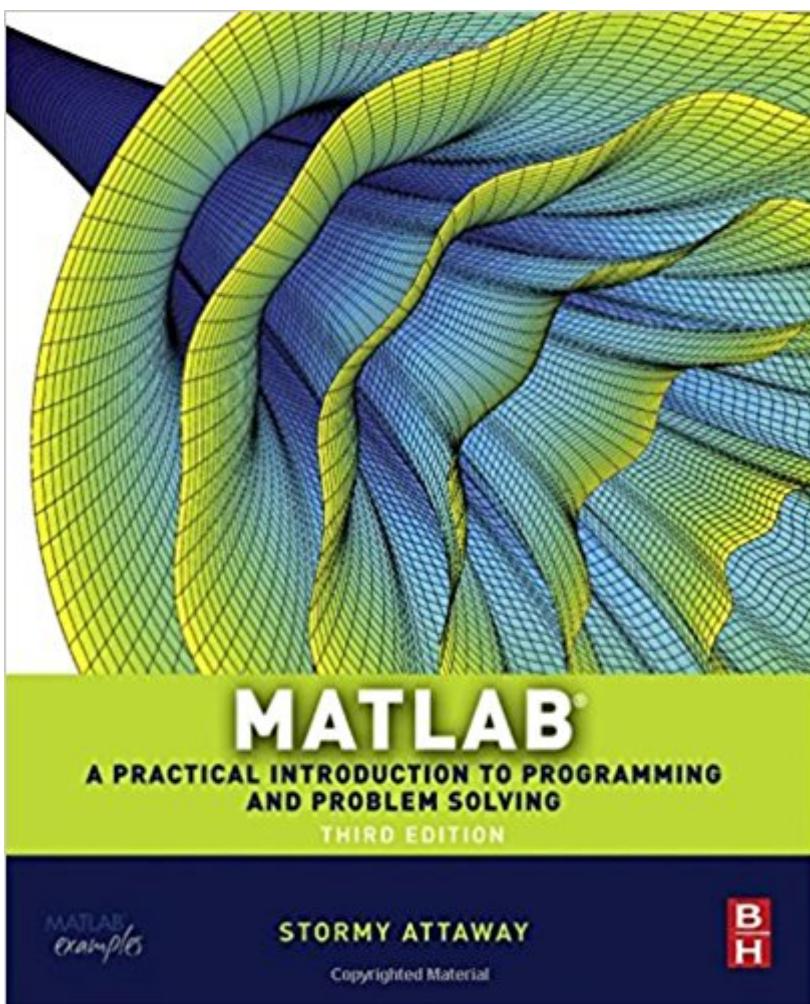


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# Matlab: A Practical Introduction To Programming And Problem Solving



## Synopsis

MatLab, Third Edition is the only book that gives a full introduction to programming in MATLAB combined with an explanation of the software's powerful functions, enabling engineers to fully exploit its extensive capabilities in solving engineering problems. The book provides a systematic, step-by-step approach, building on concepts throughout the text, facilitating easier learning. Sections on common pitfalls and programming guidelines direct students towards best practice. The book is organized into 14 chapters, starting with programming concepts such as variables, assignments, input/output, and selection statements; moves onto loops; and then solves problems using both the programming concept and the power of MATLAB side-by-side. In-depth coverage is given to input/output, a topic that is fundamental to many engineering applications. Vectorized Code has been made into its own chapter, in order to emphasize the importance of using MATLAB efficiently. There are also expanded examples on low-level file input functions, Graphical User Interfaces, and use of MATLAB Version R2012b; modified and new end-of-chapter exercises; improved labeling of plots; and improved standards for variable names and documentation. This book will be a valuable resource for engineers learning to program and model in MATLAB, as well as for undergraduates in engineering and science taking a course that uses (or recommends) MATLAB. Presents programming concepts and MATLAB built-in functions side-by-sideSystematic, step-by-step approach, building on concepts throughout the book, facilitating easier learningSections on common pitfalls and programming guidelines direct students towards best practice

## Book Information

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## Customer Reviews

Stormy Attaway is Assistant Professor and Faculty Coordinator for Special Programs within the Mechanical Engineering Department at Boston University. She also currently serves as Director of Curricular Assessment and Improvement for the College of Engineering. In this capacity, she coordinates the curricular assessment and improvement programs within the College, in order to better the academic experience of the undergraduates. She has been the course coordinator for the Engineering Computation courses at Boston University for over twenty years, and has taught a variety of programming courses using many different languages and software packages.

I'm an engineer/mathematician but NOT a programmer. I have long sought a powerful but easy to learn language for programming algorithms that arise in my research. I used Mathematica for a couple years but found that, while it was very powerful, the language was not intuitive (for me). Someone suggested I look into MATLAB and after a very brief investigation I decided MATLAB was the perfect solution. I started with the MATLAB Quick Start guide and that got me going. I tried another very basic text and that helped also but it was incomplete. Then I bought this text. I found this text to be both user friendly AND fairly comprehensive. I can't suggest how complete it is since I am far from an expert, but whenever I think "I want to do this" I find that a quick trip to this book (through the index) gets me to what I need. It is both a great learning text AND a great reference. JUST WHAT I WAS LOOKING FOR. This book could be used as an initial primer on MATLAB but I suggest you find a super simple intro text first (just for your first day or two) and then, once you get your feet wet, switch to this text. I think it will be all you need until you get to be a near expert ... I never expect or plan to get that sophisticated, so I think this is my MATLAB bible. Buy it!

It is, indeed, an Introduction and it is practical as claimed - four stars. It's well organized and there is an amazing amount of material in the book. It's broad in scope. Anyone who has programmed in any language along the way will be up and running in a short time with this book as a reference and teaching tool - NICE. It does a really good job in those areas. A lot of thought obviously went into the selection and sequencing of subject material. Seems to achieve broad range of subjects by skillfully managing the level of detail and diversity of applications examples to prevent getting bogged down in individual areas and not achieving its overall objective. Well Done! With this book as background, the student can pick up with the native MATLAB Document "Docs" form "help" and

get along just fine. In my opinion, there is a glitch in the printing style of the book as far as code examples provided. They are printed in a very fine-line font style that is a hard to read and tiring on the eyes if you're really studying the material. The font contrast goes way down compared to ordinary text font. The publisher used light blue, olive and grey backgrounds for code examples, I guess to try to help the low-contrast font issue. Too bad. I suspect they tried to use the built-in MATLAB capability to easily export code out of the Command Window etc. directly into an external document. All the other text in the book is perfectly okay. Next printing will be a chance to fix this.

Great book for my purposes. As someone with a MS in Computer Science, I was looking for a book that would teach me the idiosyncrasies of MatLab rather than teach me programming in general. The book did that very well. In very a short period of time I was reading data from files, building modular programs to manipulate data, and plotting the results. I didn't find any examples where MatLab worked different than the book taught. It had very good coverage of the basics, and had good coverage of more advanced topics.

A very good book for getting introduced to MATLAB. It is very easy to read and understand. The book is written in a conversational tone which makes it easy read and follow. The examples clearly illustrate the material being talked about and the chapters are concise enough to get through in a decent amount of time. I used this book in an intro to programming class and it was my second attempt at learning MATLAB, this time I succeed and got an A.

The more books I see on Matlab, the more I want to write my own. This intro isn't bad, and it's far more complete than most. The introduction to matrix and vector math is adequate. The coverage of graphing commands isn't as good, but it's not bad. There's an odd focus on programming looping statements and only afterwards is there an attempt to teach the vectorized instructions that are always the first way to code in Matlab. The book is clearly targeted at Engineering students who already know calculus, so the mathematical sections assume a lot. If so, there isn't nearly enough mathematics, because engineering students could use a lot more operations. There is way too much coverage of loop statements that generally should not be used, while there is not nearly enough of doing statistical and numerical operations that students want to use a lot. A lot of the examples are a little forced, and there isn't enough teaching how to write programs in Matlab. In short, this book is a good introduction to Matlab, less good at graphing in Matlab, and relatively poor at teaching how to do mathematics in Matlab or program well in it. It's the best I've found so far.

I selected the text for a class that I was teaching for home-schooled students in high school grades. I found it to be moderately useful. I chose MATLAB as the language because I work in this language every day. Students going into engineering and science will benefit from learning the language for numerical computing. The examples are adequate, but the development of how to write for the MATLAB GUI is not really useful for this level. In my opinion, this book was the best I could find that introduced the fundamentals of programming to the students, but it was a little more advanced than a sophomore average student was prepared to learn. The students that had some programming experience did well with the book, the others that had no experience found this to be of marginal use. I spent many hours Skyping with students to help them complete the homework assignments. I am inclined to try Python if I teach this class again.

Not the best translation, however learning another language is always difficultÃ¢â€¢â€¢ .

This is a well written introduction to MATLAB for freshman (for FRESHMAN!). I took a class that used this book lightly and have kept the copy to reference from time to time. Much much better than the book by Palm.

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